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A P P E N D I X;

CONTAINING

O B S E R V A T I O N S

CONCERNING

F O R E I G N P R I S O N S A N D H O S P I T A L S:

COLLECTED

B Y M R. H O W A R D,

I N H I S C O N C L U D I N G T O U R.

TOGETHER WITH

T W O L E T T E R S T O M R. H O W A R D,

F R O M J O H N H A Y G A R T H, M. D.

A D V E R T I S E M E N T.

THE Papers left by Mr. HOWARD were brought to England by his servant, and by him delivered, with the rest of the effects, to his executors. To the larger memorandum-book, consisting of a fair transcript of his daily notes and observations, the following notice was found prefixed, written upon a blank leaf.

“ M E M O R A N D U M.

“ If these rough Notes should ever be thought proper to be printed, they should be
“ corrected and revised by my friend Dr. PRICE, or Dr. AIKIN; and the latter
“ to correct the press.”

“ JOHN HOWARD.”

In consequence of this direction, the Papers were sent to Dr. PRICE, at the time when he was unfortunately incapacitated, by the illness of which he died, from attending to them. At his desire, they were forwarded to me; and I lost no time in performing the task committed to me, of fitting them for the press. Dr. HAYGARTH's excellent Letters to Mr. HOWARD on Lazarettos were, with his concurrence, subjoined, at my request, by the publishers.

GREAT YARMOUTH,
Dec. 1, 1791.

JOHN AIKIN.

A P P E N D I X.

I N T R O D U C T I O N.

I N the account of the principal Lazarettos in Europe, which I published the beginning of the year 1789, I mentioned that it was my intention again to quit my country, for the purpose of re-visiting Russia, Turkey, and some other countries, and adding an Appendix to that work; as I wished to gain further knowledge on a subject that for some years had engaged my attention; and with the hope that the torch of philanthropy might be conveyed into remote countries. In confidence on God, who had been my help, I cheerfully set out on my journey, and came to *Amsterdam* the 7th of July, 1789; where I first visited the hospitals for the sick.

I N the CITY HOSPITAL, the apertures that have been lately made in the ceiling of the men's ward, make that room fresher than the women's lofty ward; and I observed to the physician, whom I met on one of my visits, that in such long wards, a window, such as was in *Guy's Hospital*, (of which I shewed him the model) from the ceiling to the floor, would be proper. All the wards were clean; but the patients, neither in their linen nor persons, were so attentive to cleanliness as might have been wished; a fault which the prejudice of the faculty, relative to the unsalutariness of fresh linen, has to answer for. The black stone or marble floor made the doctor put on slippers over his shoes: I could not but wish the floor was boarded round the patients beds.

HOLLAND.
AMSTER-
DAM.

The PEST-HOUSE is out of the city. At both my visits, I had the pleasure to find every ward sweet and clean, the patients calm and quiet, and that order that I wish to find in all hospitals. This I the more readily mention, as the state of this house occasioned me to censure it in a former work. Here were 107 men and 129 women.

In the STADT-HOUSE many judicious alterations have been made in the debtors' room, by the worthy president, burgomaster *Randolp*; and in a further allowance to the aliment of prisoners. He, with Mr. Sheriff *Hartfinck*, did me the honor to accompany me into the dungeons, and other prison-rooms. The torture-chamber, and the different engines and modes of torture, to force a confession of a suspected crime, I give no account of, as I know those amiable magistrates wish such a practice abolished. There were six criminals and twenty-three debtors.

I visited the RASP-HOUSE: the prisoners task is not heavy (50*lb.* of logwood) as they have all done at three o'clock: their friends are allowed to visit them in the court three days in the week, *viz.* Monday, Thursday, and Friday, but must pay two stivers, as all other persons, to the keeper. The court not washed, and is offensive. One of my visits was on a Sunday morning, to attend the public service, which began in the chapel at nine o'clock. The prisoners, between 70 and 80, came decently in, and seated themselves on benches. One on the first form stood up, and called over by his list all their names, to which each answered. The chaplain then began the service with a short extempore prayer; he read a psalm, and most of the prisoners having books, they sung; he then prayed for a quarter of an hour, and afterwards preached; then catechised ten of the prisoners, and expounded each of the questions to them. He again prayed, sung an hymn, and concluded with a short prayer. The service continued two hours: the prisoners, who were neat and clean, behaved with the greatest decency and attention; not even a smile or whisper did I see amongst them. One having for a few minutes dozed, the chaplain stopped and reprimanded him; he made a very humble excuse: the keeper immediately ordered a stoppage of his tobacco; but as he was one of the catechumens who was most expert in his answers, it was made up to him. The Jews are, very properly, excused attending. Not the least noise in the court; which I should have heard, as I sat close to the window. —I have formerly mentioned the abridgment of the term of confinement at *Lady-day* by the old magistrates, who examine the books, and attend to the report of the chaplain and keeper; which is a strong incentive to the decent, diligent, and proper behaviour of prisoners. I must again remark, that the children of these persons, as of those who are executed for capital crimes, are not left destitute vagabonds, but are brought up in the orphan-house, that they may not be inheritors of the folly and wickedness of their parents. In the new workhouse, *July 13*, there were 730 prisoners.

The INFIRMARY was somewhat cleaner than at my former visit, but the patients had no sheets; the other bed-rooms full of vermin: the mendicants too thinly clad, by stuff spun and wove in the house. That part called the *Spin-house* is under another direction: here all was in order; prisoners at work; the notable mistress at her desk: her rooms all neat and clean, linen on the beds, and these prisoners much warmer and better clothed. This department, from many years observation and visits, seems to me the best model of a house for the correction and reformation of the faulty of the female sex.

The sheriff was so kind as to give me the list of the *executions* at *Amsterdam*, with the names and crimes of the sufferers, from the beginning of the year 1780, to the time

time I was there in 1789; by which I find only nine persons have, during that period, been executed in that populous and trading city *.

* In a former publication I mentioned the number of deaths in Amsterdam, to the year 1782. I now continue it, with

1783	-	-	9,144.
1784	-	-	10,301
1785	-	-	7,108
1786	-	-	7,801
1787	-	-	8,612
1788	-	-	10,354

I add,

EXTRACTS of OBSERVATIONS on the *populousness* of AMSTERDAM; by Dr. HOUTTUYN, published in 1783.

This gentleman supposes that there are, in Amsterdam, at least 200,000 souls; and supports his hypothesis by the following arguments.

1. In the year 1622, the inhabitants were numbered, and found to be about 100,000; the yearly number of deaths was then, on an average, full 4,000. The yearly number of deaths is now full 8,000; consequently the number of inhabitants may be estimated at 200,000.

2. In the year 1768, the number of inhabited houses was nearly 30,000; and the Doctor supposes, that from that time to 1783, there was an annual increase of 50 houses, which brings the number, in 1783, to 30,750. Reckoning, therefore, 7 persons to every house, the number will be 215,250 souls.—N. B. Maitland, in estimating the populousness of London, supposes 15 persons to every two houses.

3. The number of families, in the year 1747, were found to be 41,561; and, from the additional houses built since that time, he estimates the number to be increased to 46,000; reckoning these at only $4\frac{1}{2}$ to each family, the number of souls will amount to 207,000; if the families be estimated at five persons each, the amount will be 230,000.

4. This calculation is further confirmed by the number of members of the several religious persuasions. Of the Dutch established church, the number of communicants is 70,000. As these are seldom received as such till sixteen years of age, the Doctor adds 35,000 for those who are younger, agreeable to Dr. Halley's estimate, that, of the number of those actually living, 3-10ths are under $15\frac{1}{2}$ years old.

Thus the communicants of the established church are	-	-	70,000
Add $\frac{1}{2}$ non-communicants	-	-	35,000
			105,000
Lutherans, communicants	-	-	30,000
Add $\frac{1}{2}$ non-communicants	-	-	15,000
			45,000
Roman Catholics, communicants	-	-	30,000
Add $\frac{1}{3}$ non-communicants, because admitted younger	-	-	10,000
			40,000
Arminians, Anabaptists, &c.	-	-	10,000
Jews, who increase very much yearly	-	-	20,000
According to this calculation	-	-	220,000 souls.

In

UTRECHT.

In the Stadt-house at UTRECHT, there were no prisoners for capital crimes. A few men for small offences were on bread and water; as I have seen in Germany for drunkenness and riot; a longer or shorter term being left to the discretion of the magistrate.—I have mentioned in my former publications, that there had been no execution in the city or province the last twenty years; I have now further to add, that there has been none since my first visit in 1776.

OSNA-
BURGH.

The prison at OSNABURGH is both the gaol and house of correction, the description of which I gave in my former publications. The floor below the ground is for capital offenders: the cells are close, dark, and offensive; they open into strong passages. In one of these was a poor object, who was ironed hands and feet, and also chained to the wall of his cell. His wife I found in an offensive and dark cell, in an upper floor, weeping and bitterly lamenting her unhappy situation. I waited on the chief magistrate, who very readily and kindly assured me, that orders should be immediately given to soften the rigour of her confinement, and that the door of her room should be kept open into the passage. On that floor, appropriated for correction, there were eight men and seven women; they were clothed in brown and blue coats, and were employed in spinning. They are properly fed in three meals, and have one pound and a half of bread, a good bowl of greens, and a pint and a half of beer a day, all of which I found good of the sort. These rooms also were, as on my former visits, very dirty and offensive; this I mentioned to Le Baron *de Borſch*; he said the prisoners should, as in Holland, have the Saturdays entirely devoted to the washing and cleaning the house; which is the more necessary as there is no court to this prison. These prisoners attend public worship, where there is service on Sundays, one part of the day for Protestants, the other for Roman Catholics; and each chaplain has his (proper) desk, for his books and ornaments. The Jews have every indulgence, as to their sabbath, diet, and clothes. I have formerly mentioned, that the *mode* of torture here, is more excruciating than in most other countries; and is known by the name of the *Osnaburgh torture*, and this has still been *improved* upon by a counsellor from Paderborn.

HANOVER.

At HANOVER there were no criminals for capital offences in the prison on July 22d. In rooms up stairs there were seven prisoners; one a very pale object. On observing several chalk marks in his room, he said they were the weeks of his confinement (42) and his process not finished. Others were not begun. This I have hinted at before; but this well-known evil still continues. I also, in my last publication, said, that the execrable practice of torturing prisoners is here used. I am sorry to say it is not abolished, but still in the power of magistrates to inflict.

In October 1781, I had the honor to wait on his royal highness the Bishop of Osnaburgh in the castle. I then informed him, that his executioner had lately been brought hither to inflict the Osnaburgh torture on a criminal. His royal highness desired some description of it: the cruel mode struck his highness; and I then referred him to the judge, who was present; adding, that in this tour I had been in Sweden, where, by a
late

late good and popular act of the king, *torture* was abolished, and that the door into that cellar in the prison at Stockholm was ordered to be closed and bricked up *.—I beg leave, on this subject, to copy the late king of Prussia's order † for the abolition of the torture, who set the noble example the 3d of June 1740.

* Have I not often reason, with a sigh, to say, "I labour in vain, and spend my strength for nought?" But I have resolved, by the help of God, to give myself wholly to this work.

Note. In France, by the "*Decret sur la réformation provisoire de la procédure criminelle,*" du Samedi 11 Octobre 1789, l'*Assemblée Nationale* considère que "*L'usage de la sellette au dernier interrogatoire, et la question dans tous les cas, sont abolis.*"

† "HIS ROYAL MAJESTY OF PRUSSIA, OUR MOST GRACIOUS SOVEREIGN,

"Having been induced, by urgent reasons, to repeal entirely the torture in all his dominions in criminal cases, those of high treason, and treachery against the country excepted, also those of hideous murders, where the lives of many have been taken away, or where many criminals have become accomplices to one another, whose connections it is necessary to discover:

"In all other cases, where the delinquents, notwithstanding the clearest proofs and strongest evidence of many valid and legal witnesses, and the like, persist, by a malicious obstinacy, in not owning their guilt, they shall be punished according to the law.

"In consequence whereof, his Royal Majesty orders most graciously his actual privy minister of state, De Cocceji, to see the needful done.

"Charlottenburg,
the 3d June 1740.

(Was signed)

FRIEDERICK."

"To the minister of state, De Cocceji."

"FREDERICK KING OF PRUSSIA, &c. &c. &c.

"The inclosed copy of a privy order, dated 3d instant, shows more circumstantially, in how far it is our will to have the torture in criminal cases abolished.

"In consequence hereof, you will conform yourselves most dutifully to the same, and act accordingly where it will be required.

"Berlin,
the 19th June 1740.

(Was signed)

COCCEJI."

"To all colleges and courts of law."

"It is hereby attested, that the above copies, after a strict collation, have been found exactly corresponding with the original acts, that are repositied in the royal privy archive. To testify the truth, I have signed the presents by my own hand, and applied the seal of the privy archive.

"Berlin,
7th August 1789.

(Signed)

CHR. AUG. LUD. VALAPROTH,
His Majesty's privy keeper of records, and secretary."

The

The orphan house and house of correction, which is out of the town, was in great order; but, on seeing the children at dinner, I could not help observing that, by their countenances, something was wrong in that house, as they had a pale and uneasy look. We afterwards found the bed-rooms dirty, the bedding scanty, and no linen to them; the children fed by the master, at 1 *gro* and 1 *fen* each, = 2 *d*. The good burgomaster *Alemann*, the noble founder of this institution, is dead since my last visit; but I am persuaded his kinsman, Mr. Conseiller *Falke*, the present director, will make some alterations for the benefit of this establishment.

The orphan house and house of correction for the town, is an old building, and not very clean; yet, the children had a more healthy and cheerful look than those I last visited: they, I found, were better fed, and had linen on their beds. The prison part for men was empty; but the room for women, in which were 10 or 12, was very dirty, and intolerably offensive. In this house I saw Mr. Conseiller *Falke*, with the minister, and two or three other gentlemen, distribute the weekly allowance to the poor, who received what was given them with thankfulness, and retired in great order: those (poor) women, who did not refuse to sweep the streets, had a small addition made to their allowance. The town is divided into seven districts; to each of which is appointed a respectable person, to whom the poor, in case of sickness, make application, and he makes his report to a magistrate appointed for that purpose, who directly orders the physician of that district to attend such pauper. The physician makes his report every quarter.

The hospital of St. Nicholas is an old and good institution for freemen's widows, wives, or daughters. Here are 16 apartments, each consisting of a small room for a kitchen, a little dining-room, and a bed-chamber. The inhabitants pay about £. 10 on entrance, and have their apartment for life, with a little garden; and gratefully enjoy some other small emoluments belonging to this charity.

The hospital for the sick is only one large room, crowded with beds, in which are patients of *both* sexes,

A new military hospital is now building, on an improper spot. It is too contracted, and on a bad plan, as the rooms will be only 17 feet by about $8\frac{1}{2}$, and these will open into a dark passage about $6\frac{1}{2}$ feet wide.

BRUNSWICK.

BRUNSWICK. The tower over one of the gates, which was the prison for capital offences at my former visits, is now taken down, and such prisoners are sent to the Stadthouse. Here were on the three floors, only four prisoners; their allowance two *bonne grosche* a day each, which is about $3\frac{1}{2}$ *d*. In the house of correction I read the order and conformed to it again with pleasure, *viz.* "That decent people may inspect the house; but no more than four at a time; that they must put a florin (about 2*s.* 6*d.*) into the box, for the prisoners whose term is expired, to assist them on passing on their journey, and prevent them from begging or stealing: lastly, nothing must be given to the keepers, or

to

to the prisoners confined for punishment." Here were 41 men and 50 women; the employment, spinning and weaving. The diet is in four classes and according to their work. I observed on the slate there were only two on the first class, or the best diet, and four on the lowest, which is 1 lb. of bread, a little soup and small beer. The house was very dirty, the floors never washed, though so many women prisoners; the only clean room was the chapel on the upper floor.—But a proper attention to cleanliness ran through all the hospitals for the sick. In that for the military, there were nine rooms, but only two patients, the troops being at *Maastricht*. Though the torture is not abolished, I had the pleasure to hear that the last instance of a person suffering it was about eighteen years ago, and that the room had not since been opened; but by the favour of Mr. *Fredericksdorff*, conseiller de justice, it was opened. The descent is by fifteen steps, to a dark room, in which are some of the instruments of torture: through this room is another arched room or cellar 18 feet by 15, very black and dark: at one end is a bench for the judge, lawyer, secretary and surgeon; opposite them is a table for candles, books &c. The prisoner who suffers the torture, the executioner and his man, are before them. This is done about midnight, though the thickness of the walls (three feet) the four doors (which I passed), the dirt floor, and depth under ground, must prevent the most agonizing cries from being heard any where but in that room. I saw all the remaining engines of torture, which are kept at the executioner's house. He seemed with pleasure to shew the mode of application on the first, second and last question; and very readily answered any enquiries, having been several years in that occupation at Hanover; though here (he said) he had only beheaded four or five. On asking if nothing was put into the tortured person's mouth, as I had in some places seen, he replied "No, the Osnaburgh executioner thinks they suffer less;" and on his describing some of the modes of torture (which the wit of devils and men had invented,) he said, "Sir, the Osnaburgh torture is still ruder."

But I hasten to another country, where the torture has not been inflicted for above twice eighteen years, viz. BERLIN. In the court prison there were eighteen men, debtors and smugglers, and two women spinning cotton to earn their allowance of one grosche and a half a day: the former in the upper rooms of the old prison, the latter in a new and separate part adjoining; the old dungeons being not now used. I have mentioned the punishment of smugglers standing exposed at the gate with a machine round them, called a Spanish mantle, similar to a plate I gave of it at Copenhagen. Here also is a machine in which the hands and neck of women are fastened, called a fiddle, and they stand exposed for one hour for three successive days. This prison was quiet and in great order. In the city prison there were about ninety prisoners, many of them smugglers or debtors; several prisoners in the dungeons (11 feet 9 inches by nine) their processes long; the whole prison dirty, never white-washed. In the court, there were men, women, and boys. The gaoler sells liquors of all sorts. The allowance to debtors, paid by their creditors, is two grosche a day, about 3½d.: the criminals have 1½ grosche.

BERLIN.

The *Maison de travail* I found in the same good order as in my former visits; in July there were 480 persons, vagrants &c. confined; their chief employment carding and spinning wool. In their diet they are in three classes; but the very great number of men, women, and children who were at work together in *one* room, and in a house where a separation might easily be made, must in several views be improper.—In the *Orphan* house there were 60 boys and 60 girls: the children clean and fresh; wash three times a day; bathe every Friday; the bed-rooms clean; the boys lie single. The infirmary an old house, and too far from the hospital.—In *La Charité* or General Hospital, several rooms contain ten beds, and the patients pay a florin, about 2s. 6d. a week. Here are rooms for lying-in women; and apartments of two rooms for persons who pay 100 florins. In a large room, a neat table was set out for the convalescent patients, which I have often wished for in other hospitals. Here is no military hospital, but each regiment has one or two sick rooms: in each were seven or eight beds. Those I visited were clean and most of them empty, which in great part is owing to the strict discipline, constant exercising and reviewing the men, and many having wives, who also have a small weekly pay, and with their husbands a room in each *caserne*.

SPANDAU. In the fortrefs at SPANDAU there were, August 4, 1789, a hundred and seventy-one prisoners: several of them are condemned for life: one had been here thirty-two years. Their allowance is only 2*lb.* of bread and water, and after the first year a frock and breeches, a shirt, a pair of stockings and one pair of shoes, annually. They are to work four hours a day for the king; and when the governor employs them as carpenters or masons, he gives them two *grofche* a day, equal to about 3½*d.* Many of them were spinning cotton for their own emolument at their leisure hours; but several had an iron collar round their neck, the mark of their contentions and quarrels. Their rooms under the ramparts, very close, dirty, and crowded; and as the governor (Scott, our countryman) is desirous of softening the rigour of confinement, and has fitted up two rooms for the sick, I will here take the liberty to drop a few hints.—The prisoners should not lie on shelves over the other prisoners; but there should be only one row of barrack beds, each person to be allowed two feet four inches, with an oak partition of ten inches at the head, and six inches at the feet: an aperture for light and air to be made in the centre of the vaulted rooms; and twice a year, the rooms washed by the prisoners with fresh lime and boiling water; each partition to have proper bedding, that the prisoners may not, as they now do, lie in their clothes; and also to be numbered; and no prisoner to change the place allotted him, without the consent of the governor. A room to be appropriated for a work room. The court enlarged by putting the pales 40 feet back; three or four stone basins for washing their linen; and the reservoir for soaking timber, which seemed not used, would make the most proper and salutary cold bath for them. No spirituous liquors on any account to be sold to them. The rules and orders as to cleanliness, sobriety, work &c. to be signed by the governor, and read to them in the chapel the first Sunday in every month.

month. In the upper room of one of the towers there was a state prisoner: underneath there was a dreadful dungeon; a prisoner had been removed from thence the morning I was there. I have formerly mentioned, that women are not permitted to continue a night in the castle; but whilst I was walking with the governor, the mother of one of the prisoners humbly petitioned that she might see her son, which was readily granted, and a guard attended her.

The House of Correction I found in the same neat and good order as in 1778 and 1781. Most of the prisoners were women; the chief employment now was spinning cotton and not wool; a small part of their earnings they have to buy a little tea, milk &c.

The prison is in a close part of the city; the rooms are on the two upper floors; in one of which rooms there were seven men; and in another, eight women spinning. I observed, none of the men were in irons; I was told they are never tried in irons, nor are they put on, till after conviction.* In an upper room there were eleven sick women; these I understood were not prisoners, yet, if I might conjecture, sent there to perish by nastiness and neglect.

KONINGS-
BERG.

In the House of Correction, August 13, 1789, there were 26 men and 42 women. Here was no separation of the old and young, of the lesser from the greater criminals; no inducement or hope by good behaviour of shortening their term. The first view of the countenances of the prisoners, convinced me of sad neglect: no infirmary: the sick with hardly a blanket to cover them; the men in irons. From two or three that were dying I requested the magistrates that their irons might be taken off, as the surgeon with us had no feeling for them. The sick women in three other rooms were dirty beyond description, and seemed in want of every comfort of life. The inspector and keeper, old and infirm. The magistrates, on this visit with me, were covered with vermin. I mentioned the custom in the Dutch spin-houses of devoting the whole day of Saturday to washing, and that this also introduces habits of cleanliness in the female sex. †

The old House of Correction, which was burnt down last winter, was situated near the river, and had a spacious airing ground: the two wheels or the machine for stamping dyers

* In some Roman Catholic countries, I have been informed that the priests have refused to administer the sacrament to prisoners, unless their irons were taken off.

† In several places I now take the liberty to mention what seemed to me an obvious remedy to some defect that happened to strike me. I hope it will not be thought by any gentleman, that I do it in the style of a dictator. Yet should it be asked, why I did not so generally do it in my first publications, I reply, that my purpose then was to collect what was good, with a view of a reform in my *own* country; as I did not think any observations of so private an individual would either reach the eye of foreign magistrates, or be attended to by them: but, it has pleased God to order it otherwise; it would therefore be, on my part, refusing to do the good offered to my endeavours, were I to abstain from such remarks as may correct abuses, and alleviate misery in all the places I visit.

wood were not burnt. These were worked by eight men, two in each wheel, one hundred turns; and one prisoner was inspector.

Here is another house of correction, with a neat garden, and near a pleasant lake: there were about thirty prisoners in separate and clean rooms; the prisoners looked clean and healthy, which on my noticing to the keeper *Gottlieb Urbani*, he said he had lived 37 years in Russia, and had erected a bath in his garden for bathing and sweating; and that his prisoners every Saturday in some warm room thoroughly washed and cleaned themselves. The kind attention of the magistrates, emboldened me to ask permission to copy the plan of this Russian bathing house; which the privy-counsellor *Hippel*, readily granted.—The general hospital for the poor, sick, and insane, consists of several houses in a court. In the sick wards, I found the surgeon, who seemed sensible of the necessity of fresh air, cleanliness and a proper diet, to prolong life, and restore the health of his patients. The bread for the house was good rye bread, being well made and well baked. I mention not the closeness of the cells of the insane, as a new hospital was building for such objects of compassion.

MEMEL. In the CASTLE at MEMEL, there were, August 17th 1789, 57 men and 11 women; most of them were in dark and damp rooms built against the fortifications, and without bedding. Their allowance is 2 lb. of bread and water; their employment, removing the ballast that is flung out of ships. There were only 22 out at work, but at times there are so many vessels, that there is work for all the men and women. Some of the prisoners were sick, the others had a pale and languid look. If such rooms were kept clean, and scraped and lime-whited twice a year, and a little bedding were given to the prisoners, they would be more healthy, and having more light, be better enabled to gain a small trifle by their work.

MITTAU. At MITTAU in COURLAND twelve of the criminals or slaves who were in irons with a chain between each leg, as at *Memel*, were at work hewing and sawing timber for the palace, which was burnt last winter. I observed they were as handy and quiet as the other workmen in the court; and though I repeated my visit to them and was alone, none of them stopped their work, or gave the least hint of a request for money: three were sick, and as such were objects of compassion.

RIGA. The prison and house of correction (*Zugthuyts*) is a square building in the citadel: the prison part was very dirty and offensive, and little attention paid to order, the separation of the sexes &c.; but in the *Zugthuyts*, the prisoners had a cheerful and healthy look; the rooms were clean. Here were seven hand mills, and six men were grinding corn: in another part six women working on a lighter mill. The other prisoners who were not capable of such hard work were spinning. The former, work in summer from four to eleven, and from one to eight; and in winter from six to twelve, and from one to eight in the evening; their allowance 22 s of bread and some gruel made of grits which was good.

Every

Every fortnight these prisoners use the warm bath which adjoins to the prison. About ten miles from *Riga*, the slaves or condemned persons, were in a prison or *ostrog*, similar to that I gave the plan of at *Moscow*; namely, several wooden houses, surrounded with high pales. The rooms contained about 42 persons; each had his bedstead, and most of them a little bedding. The two sick rooms were clean and not fanded, fresher and more airy than the military hospital, the beds not being crowded, and each man had his bed. In one of the other rooms they were all foreigners, (42) most of them for debt, some for so small sums as three or four rubles (eight to eleven shillings) but with some unfavourable circumstances attending the debt, so that persons are not permitted immediately to discharge them. They are allowed from government twenty copecs ($6\frac{1}{2}d.$) a day, eight of which are for their diet, clothes &c. and the other twelve for their creditors, till the whole debt is paid off. These were also in irons and work with the criminals at the public works. In other rooms were 345 prisoners. In a small inner room, I found two Russians, sent hither about four years ago: they had a guard at the door, and had never been out of the room, and are heavy ironed both hands and feet: they are never spoken to, nor is their crime known: they had suffered the punishment of the knout, (which in my former publication I have described) and had a piece cut out of each nostril, and the mark on the cheeks, which is the signature of their condemnation for life. I saw several others thus marked for murder or other very capital crimes. All the prisoners were in irons, and work in summer from four to eleven, and from one to eight, unless sick, which the surgeon comes every morning to examine. There were 311 out, the day I was there, hewing timber, driving piles, wheeling and carrying the stones for a fine mole 65 feet wide and half a mile long, on which they had been employed six years: their allowance is six copecs a day, for which all their clothing and provision is found; the former bad, the latter very indifferent. As to religious instruction, once a year only they go to the chapel in the citadel; and on the other Sundays they amuse themselves, or make shoes &c. About a fortnight before my visit, the head knout-master was brought from *St. Peterburgh*, who being with the other two knout-masters at a public-house, they happened to quarrel: he immediately struck off the head of one of them; the other seeming to resent it, he dexterously decapitated him also. As no crime, not even that crying one of shedding blood, is punished in Russia with death, this man had received 270 strokes of the knout, the executioner from *Moscow* being brought for that purpose; and being condemned for life, was marked as before described. Here he met several of his former acquaintance to whom he had given the knout, and on being asked in how many strokes he could kill a man, he said, if a strong man, he could in five and twenty, but if not strong, in twenty strokes.

At the *STADT-HOUSE* there are rooms for the town debtors, and here were only two or three: down 25 steps are two dungeons, and here was only one person and not in irons, and he could receive alms at a grated window; the Russians being very kind to such persons, as I was informed at the other prison.

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The military hospital is three miles out of town: it consists of several houses in a large quadrangle: at the entrance are those for the physician, surgeons, chaplains &c.: the houses for the patients consist of four double wards, and can have no opposite windows; these wards are low, dirty, and offensive, and the passages still more so, by the poisonous sewers. The beds are crowded; the sick lie on boards saturated with infection: the walls seemed never white-washed. These circumstances, even without attending to the improper diet of the patients, prevented any surprise when I was informed that four or five hundred recruits had died there the beginning of the year. At my visit, there were upwards of 400 sick.

ST. PETERS-
BURG.

At ST. PETERSBURG I took partly the same round of the prisons and hospitals that I had done just eight years before. As to the former there has been little alteration; and the new house of correction, which was then nearly finished, has never been inhabited, and is going to ruin, as many of the upper floors are fallen in; so that I now shall pass over the prisons, and with pleasure mention some of the improvements in the hospitals of this city.

The marine and military hospitals nearly join, and make a large square with a morass in the middle; which if formed into a basin with a canal into the river *Neva*, would be salutary and sightly. The rooms were all empty, and lately white-washed, except three, in which were venereal patients, and 36 slaves who had their irons on. All the other sick were in the summer lazaretto, which I formerly mentioned with great approbation. These are rooms made of wood in an enclosed area or garden, the size 40 feet by 26: most of them have nine windows on each of the two sides, and two opposite doors at the ends, with apertures over them. These rooms have chimnies, are floored, and are about nine inches from the (sandy) ground. They are 20 feet asunder; each room contains about 42 patients, who have separate beds. The rooms were in general clean and quiet; but some much more so than others, according to the disposition of the two (women) nurses that were allotted to each room. In the centre is the bathing house. The number given me of all the sick at one of my visits, namely, Aug. 31, 1789, was 534.

A new and splendid hospital has been erected just out of the city, and opposite a fine canal: the rooms were spacious, lofty and clean, and had been lately white-washed. The patients were of both sexes, in separate summer lazarets in the adjoining court; the rooms and beds were clean and neat. Men and women prisoners come here every day; the latter to wash and clean the rooms, the former to remove what is offensive from the outside sewers of every room.

At that great institution, the house of education for noble ladies and commoners, which I gave an account of in my publication 1784, I found the good old lady *Madame Lafon* still presiding over it.

At the foundling and inoculating hospitals, and at that noble institution the military cadet corps,

corps, I passed three or four mornings. In these visits I freely spoke my mind, either in commending what I thought right, or mentioning what I thought amiss; endeavouring to enforce my observations by what was done in similar circumstances in other countries, or shewing the models of the windows &c. in our own.

I cannot leave *St. Petersburg* without mentioning a pleasant hour that I spent with the good old general *De Betkoi*, the enlightened and liberal head and director general of some of the greatest institutions in Russia.

The 9th and 10th of September 1789, I visited the marine hospital of CRONSTADT, which consists of several double wards, raised about four feet from the ground. The entrance is by dark and very offensive rooms: the wards are narrow, low, and ceiled with wood; and have no apertures: the floors were sanded, which yet did not hide the dirt: many of the beds are close to one another; and indeed little hopes can a patient have of recovery in such a foetid air.—Adjoining are eight summer lazarets, which are airy and spacious wood buildings, each containing about 44 beds. These wards were sanded, which I object also to, as a harbour for vermin. The attendants on the sick are all men. Here were about 320 patients, and in the other wards 270. The third or upper floor of the new barracks is now used only *pro tempore*, for the sick: these were eight double wards; they were quite clean, being washed twice a week, and not sanded; the bedding clean, and did credit to the attention of our countryman the physician who presides over them. Here were 318 patients. Though these rooms are generally occupied by the sailors when the fleet is in the port, yet I shall take the liberty to hint, that where the ceilings are so low, there should be apertures in them, or near them in the side walls; and the upper part of the windows should open; and great attention should be paid to prevent the offensiveness of the sewers. The prevalent disorders here as at *Riga* were the intermittent fevers, and the scurvy, with the bloody flux. The diet within a few months has been altered, and seems directly opposite to these disorders; the patients having now no milk, rice, barley, or sage tea, no mutton or veal broth; but beef and beef broth; rye bread, which was both badly made and baked; quas sour and flat; and a vile decoction, which was brought in a tub every morning and served to all those patients who chose it. With what concern must a feeling mind be struck, when many objects are looking up for help and the probability of a cure is thus cut off!

In the old prison there were 91 criminals and about 200 slaves sent here by their masters or landlords: these latter were separated from the former, but none had any beds: the rooms very dirty, and the prisoners seemed sadly neglected.*

* I mentioned in my former account, that I had seen at *Cronstadt* the ground marked out for a new prison which was to be erected under the superintendence of our countryman admiral *Greig*; but the prisoners and the sick here, as well as many others, have reason to lament the death of this good and great man; whose favourite maxim was, "If I cannot do what I would, I will do what I can."

I looked

CRON-
STADT.

T W E R.

I looked into the hospital and prison at T W E R. In the former there were only about half a dozen patients; in the latter, the men and women prisoners had their separate rooms on the first floor: there are no dungeons: the prison was very dirty, and not white-washed since I was here eight years ago, when it was just built. The prisoners subsist on bread, as much as they *now* chuse, and the charitable contributions from the box fixed on a pillar on the outside.

M O S C O W.

The *Prison* or *Ostrog* at M O S C O W, of which I gave the plan and description in my publication in 1784, is now disused, and about four years ago its place supplied by a prison built of brick, with a surrounding wall; which contained at one of my visits, in *September* 1789, 41 prisoners, whose sentences were not determined; 185 criminals, 34 women, and 18 sick; in all 278. The chapel is in the centre of the building, from which four doors open into the opposite passages, which are dark and narrow, scarcely five feet wide. On each side are the rooms for the prisoners, with stoves and barrack-beds, but without bedding. One of the quarters is appropriated to women; another to criminals whose trials are not finished; another to petty offenders; and a fourth is used for an infirmary, and for prisoners of not the lowest rank. All the rooms have their windows towards the area and the surrounding wall, and apertures to the passages. There is a dark room for the unruly. No wine or spirits are permitted to be bought in the prison; but beer and any sort of bread.

The *Infirmary* consists of only one room for both sexes; but there were in it only 18 men, most of them miserable objects: several with fevers; no bedding, and little or no attention paid them; as some of the sick declared they had had nothing all day, and it was then five in the evening. Each of the quarters has a kitchen, which seemed of little use, as the prisoners chiefly subsist on charity; there being for this purpose several tin boxes placed on the outside of the prison, and a chest between the outer and inner gates. These are opened every *Saturday*, and the money divided among the prisoners.

In the exercise of this charity the *Russians* are not defective, as by the looks of the prisoners they seemed not in great want of necessaries. Hence I conclude, that the nation is humane; and in travelling through a great tract of the country, the peasants appeared to me of a kind and hospitable disposition.

New Government, or City Prison. To the court and rooms of this prison is a descent by a flight of many stone steps. There are two dirty and damp rooms, in which are confined both debtors and criminals, men and women, without any distinction, or any allowance. They lie on barrack-boards round the rooms, but without any bedding. The prisoners are miserable objects, who subsist on occasional charity. Such a prison is a disgrace to any civilized country. Here were about 80 prisoners; sometimes there are 150 in one of these rooms.

The *Military Prison for deserters*, consists of two rooms, each $20\frac{1}{2}$ feet square. Round three sides of the room is a shelf, where part lie: no bedding: no regular allowance: they subsist chiefly on charitable contributions. On observing to the officer who attended me, that there were some old men among them, he said that there were some who had been away twelve years.

Grand

Grand Duke's Hospital. This having been burned down since I was at *Moscow*, I was desirous of seeing if any improvements had been made. It is built on the same spot, as few so near the city could be better, it having a fine open plain in front. It is on one floor, elevated a few steps from the garden. The rooms are lofty, and all of them have now an aperture in the ceiling, and the upper part of the windows open, which I found in few or no other hospital in *Russia*. The rooms were neat and clean: all the beds of blue linen, clean, and of a convenient size, (six feet two, by two feet ten) not crowded, but with room on each side for making them. I tasted the bread, milk, and beer, and found them good; and indeed this small hospital would do credit to any country. Here were nineteen men and seven women; besides about the same number in the venereal wards, which are detached from the house; as are also, very properly, the kitchen and offices.

At the *Military Hospital* I found the bread very black, and neither well made nor baked. I shewed it to the Doctor, and then put the question to him, "Whether or no he thought the present alteration in the diet of the military and marine for the better?" But he was cautious, and did not choose to give me an answer. The purpose of this alteration is to fortify them, and render them able to endure hardships; but it should have been considered, that the prevalent disorders among those people are scurvy and putrid fevers. I had been twice over the four great wards of this hospital, before my visit to the first physician, and had found all the windows shut. When I went over them with him, he seemed surprized at what I told him, and ordered a proper number of windows to be opened; but, two hours after, all but one were shut again.

The *Hospital for Deserters*, in the midst of a court, in which were several sick rooms, was airy and fresh. The vents in the ceilings had, very properly, no closures. The *Botanic Magazine*, in the garden of the *Military Hospital*, had been rebuilt upon the same good plan. It consists of three floors, and is twenty-eight feet wide in the inside. The upper floor has ten windows, two of which are at the ends, all of the same size, two feet and a half by fourteen inches: they have hinges, and are kept open in fine weather. The middle floor has twenty windows. The herbs are strewed on the floor in mats, or hung up on poles. The pleasant odoriferous smell of this place induced me to repeat my visits to it.

At *Catherine's* and *Petrowitz Hospitals*, I found in the ceilings of most of the rooms, one or more apertures for air, but every one stopt up, and every window shut, in some of the finest and mildest days. Thus the *Russians* accustom themselves to warmth and close air before the cold season comes on.

A new hospital for the recruits who fall sick on their march to the army, is erected about half a mile on the other side of the river *Nieper*, and adjoining to it. It is a wood building of one floor, raised three steps from the ground. There are six wards thirty-four feet and a half wide, having four rows of beds, about twenty-two in each row, on a barrack, separated only by a board eight or nine inches high: the walk between the rows only four feet. Here were about four hundred sick; several very ill of the scurvy. I was informed, that at a little distance there were in the old hospital about one hundred very ill with the bloody-

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flux,

CREMENTS-
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flux, who were soon to be brought here. In the different wards I tasted the quas, and examined the bread: the latter very bad: the quas four. Another drink is given to those who are worst, made of honey, water, vinegar, and pepper; to which brandy is added for the convalescents. They have a sort of water-gruel, which if not eaten one day, serves for the next: no milk, rice, or sage tea is allowed: the patients are tied to a certain diet, which the physician cannot alter. The rooms were quite clean at both my visits; but the apothecary's shop very offensive. From one half to one third of the patients in this hospital die; for if the intermittent fever continues upon them, I was informed it soon becomes the putrid fever, and carries off the young men. A bathing-house was erecting, which, from the dirtiness of the patients, seems much wanted; and is the more necessary, as the attendants on the sick in *Russia* are men, who have neither the cleanliness nor care of women.

CHERSON.

The hospital is at the end of the town. The rooms near 24 feet wide and nine feet high. The beds are in rows against the wall; and in some rooms are one or two rows in the middle. The patients lie single. Bedsteads, beds, and coverlets very dirty: wards and passages never washed, nor beds changed when the patients die. At one of my visits they brought the Doctor some of the bread and quas that was to be served out, which he said was done every day; but I informed him, that neither the bread nor quas which I had seen and tasted at my former visit, were so good as these, and convinced him, that he had been imposed upon. He acquainted me, that there was linen in the wards for towels; but on desiring to see it, none was to be found. The sick were very dirty in their persons and linen: the rooms close and offensive: all disorders mingled together, except those with the itch, and last stage of the flux. The attendants are men sent from the regiments on account of their being useless from stupidity or drunkenness. Baths badly placed at the bottom of a steep descent from the hospital, and therefore seldom used. Here I saw four or five half-sick women, who were sentenced here for slight offences, to wash the hospital linen. The prevalent diseases are scurvy and intermittent fever. These disorders, from the closeness and dirtiness of the wards, scanty linen and bedding, improper diet, and bad attendance, soon turn to a putrid fever with flux, which carries off the patients in a few days. Here were a number of Swedish prisoners in the same room with the sick Russians from the fleet. This house was the pest-house, when the plague was in the town ten or twelve years ago. The primary objects in all hospitals seem here neglected, viz. *cleanliness, air, diet, separation, and attention*. These are such essentials, that humanity and good policy equally demand, that no expence should be spared to procure them. Care, in this respect, I am persuaded, would save many more lives than the parade of medicines in the adjoining apothecary's shop.

I visited the rooms for the sick soldiers of the regiment quartered here. Several were brought from the great hospital, having been there several months, and not cured; and if I may judge from appearances, those whom death spares will continue as long here; for the rooms are low, close, and offensive; many sick lie on mats upon barrack beds, with only

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one blanket to cover them. In short, as in the great hospital, there are evident marks of far too little attention paid to the patients.

WITOWKA (now BOKOIAULENSKOE) about 40 miles from Cherfon. This place has been fixed on for an hospital for soldiers and recruits, as not far distant from Otschakow, and the new town of St. Nicholas. There are eight long lazarets enclosed with reeds, situated near the river Bog, with the advantage of fine soft running water; but the country is destitute of wood for firing, as I saw not one tree for some hundreds of miles before I came to Cherfon, nor betwixt Cherfon and this place. The first sick were sent here in September 1788. The rooms are 27 feet wide, and contain each about 230 sick, who lie in two rows on barrack bedsteads, without any partitions, and so close, that within 30 feet, I have counted 16, 17, and even 18 sick. Beds dirty. Some had an old blanket, and all a stiff black woollen blanket, which covered three or four of them. The patients were dirty in their persons and linen; and, from their appearance and my enquiries, seemed sadly neglected. On asking the apothecary to shew me his *bark*, he referred to his boy, who, after searching for five minutes, brought me a pot containing near an ounce, which I should not have known to be that drug *. Provisions bad. No water for the patients to wash: no towels: the bath dirty beyond description. In short, every department of this hospital seems neglected and abused. When I saw so many brave fellows, who had fought so well for their country before Otschakow, suffered to perish here with filth, neglect, and vermin, how did my heart melt within me!

By a list of patients given me, it appears, that, from September 1788 to October 1789, there were admitted 11,319, discharged 7,639, dead 1,949. After my return to Cherfon, I was not surprised to find, that 30 to 40 had died in a day at Witowka.

One afternoon, on observing about twenty poor objects standing together at the end of the town, I went to them, and found they were recruits just out of the hospital, who were waiting for orders to go to the new town about 16 wersts distance, on the road to which is neither house nor tree for shelter. The night was dreadfully wet, and they so weak and ill clothed, that I do not doubt but that several died on the road. A gentleman who accompanied me said, that, having occasion to go from Cherfon to Witowka last winter, he himself had counted 24 persons lying dead on the road.

The troops were lodged in cells under ground (called Zimlankey) laid over with sticks and earth, having a hole at the top to let out the smoke. In this miserable condition do they pass the winter.

About a mile from the new town of ST. NICHOLAS, which is just begun to be built, are four rooms erected for the sick, on account of the number of recruits and prisoners of war, who are compelled to work hard, and have no proper accommodation, and that

* Possibly there was a mistake here, and Mr. HOWARD's enquiry was misapprehended Editor.

the Witowka hospital was full. I found here upwards of 300, extremely crowded upon barrack beds. Many of them were very ill. The quas very bad; the bread quite black and heavy: but the patients were that morning all shifted, and most had coverlets: the rooms were swept, and the surgeons in waiting, as the time had before been fixed for our visit, the brigadier Falajef going that day to view the works, who took with him the physician sent by prince Potemkin, and myself in his coach. I was afterwards urgent to see the remainder of the sick, having been well informed, that there were about 500. Upon this we returned to the town, and several officers, with the above-mentioned physician, accompanied me. Here I found about 50 such objects of wretchedness as I had never before seen together. Most or all of them were recruits in the prime of life; many dying, laid on hard coarse reeds: no linen: no coverlets: only a few remnants of their old clothes to cover them: their persons dirty beyond description: their shirts in rags. I turned to the officers, and requested them to look on their fellow-creatures, who were thus inhumanly treated, adding; "that in none of the countries I had ever visited, had I found so little attention paid to the military as in *Russia*. I knew what I said would have no other effect on them but to make them despise me, but I should assuredly relate what I had with so much concern and indignation beheld." These gentlemen, as I expected, soon left me. I then walked, and saw several recruits at their work, which was carrying sand on their backs to fill a mole. Many looked very sickly, and tottered under their burden. I proposed wheel-barrows, or light carts, with a horse or ox in each, which, as the ground was level, would expedite the work, and save the men, whose strength and spirits were broke before they got there by long marches.

Let but a contemplative mind reflect a moment upon the condition of these poor destitute wretches, forced from their homes and all their dearest connections, and compare them with those one has seen chearful, clean, and happy at a wedding, or village festival; let them be viewed quitting their birth-place, with all their little wardrobe, and their pockets stored with rubles, the gifts of their relations, who never expect to see them more;—now joining their corps in a long march of one or two thousand wersts; their money gone to the officer who conducts them, and defrauds them of the government allowance; arriving, fatigued and half naked in a distant dreary country, and exposed immediately to military hardships, with harassed bodies and dejected spirits;—and who can wonder that so many droop and die in a short time, without any apparent illness? The devastations I have seen made by war among so many innocent people, and this in a country where there are such immense tracts of land unoccupied, are shocking to human nature!

On returning to CHERSON, on *January* 6th I went the round of all the wards of the Military Hospital and sick rooms of the regiment quartered here. As to the former, I found a great alteration with respect to cleanliness, in the persons, linen, and bedding of the sick. In the latter, some small alteration for the better in that particular, but not so general as in the Military Hospital. I am sorry to add, that in the former I saw many men's portions of meat not two ounces, and the grits for gruel very musty. I also observed one or two of
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the persons attending the sick intoxicated. One had a bottle of brandy that held two quarts, who, I fear, fells it out to the sick, which must defeat the best-concerted means for recovery. How many patients do I see in many disorders, which, I am persuaded, proceed from the use of spirituous liquors ! What strict care should be taken that the attendants do not bring any to sell in the hospital ! Have I not seen unmixed spirits served round to sick and dying patients, by persons intoxicated themselves ; when, to my great surprize, I was told, that the physician had ordered it as a *treat* to the patients ! If my visits had any share in promoting this, I fear I killed half a dozen of them ; or, at least, put them some days sooner out of their misery *.

* Here terminates Mr. Howard's Memorandum Book. As he died January 20th, after a fortnight's illness, he must have been taken ill about this time ; and amid such scenes of infection and disease his health and life could not be a day secure. The latter part of his memorandums not being, according to his custom, fairly recopied, has been difficult to make out, and many things just noted down in imperfect hints, could not be completed. It is somewhat remarkable, that a few pages before the end, he has written the following passage :
" I am a stranger and pilgrim here ; but I trust, through grace, going to a land peopled with my fathers and my kindred, and the friends of my youth. And I trust my spirit will mingle with those pious dead, and be for ever with the Lord."

A LETTER TO JOHN HOWARD, ESQUIRE, F. R. S.

DEAR SIR,

ACCCEPT my grateful acknowledgments for the present of your splendid publication on Lazarettos, &c. Such an honourable token of your friendship, gives me greater satisfaction than I can express. In this, and your other works, I know not what to admire most; their spirit of benevolence to mankind; their sound philosophy, and good sense; or, the unexampled courage and persevering constancy with which all your humane plans have been accomplished. But the conscious rectitude of your conduct, must fill your own mind with such perfect gratification, that no additional satisfaction can be derived from the approbation of others. However, the chief purpose of this address is not to dwell upon the excellence, but, if possible, to suggest some improvement in the plan of your beneficent labours. I highly approve your proposal of building lazarettos in England. It is very evident, that they would greatly extend our commerce with the Turkish empire, and increase our safety from the danger to which we at present are liable of importing the plague.

The propagation of infectious diseases has been an object of my particular attention for near a dozen years. There appears to be no doubt that the plague spreads by the same laws, as many other distempers common in this part of Europe; namely, the small-pox, measles, chincough, scarlet fever, &c. I have long thought, that perfect purification from pestilential contagion might be performed with great ease and certainty. The present regulations of lazarettos appear to be extremely erroneous; both in imposing expensive and tedious restrictions, which are wholly superfluous; and in omitting others, which are essentially necessary, to purify various kinds of merchandize from infection. I shall freely submit my ideas on this subject to your unreserved objections and improvements.

The whole contents of a ship, coming from an infectious port, may be divided into two portions. The first portion may be purified on their voyage home; the second portion, comprehending what is more properly denominated the cargo, in the English lazaretto.

1. The crew, and all the articles accessible to the crew, during the voyage, may be perfectly purified, exactly in the same method which the justly celebrated Captain Cook employed, with such wonderful success, to preserve the health of his seamen, in his voyages round the world. His own words, which you have quoted, p. 114. from the Philosophical Transactions, appear to comprehend complete directions; and I would adopt them as fully adequate to the purpose. "To preserve the health of his crew, he took particular care to keep their persons, hammocks, bedding, clothes, &c. constantly clean.

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“ He was not satisfied with ordering upon deck the hammocks and bedding every day that was fair; but took care that each bundle should be unlashed and so spread out, that every part of it might be exposed to the air.” If every thing accessible to the crew were thus completely exposed to the fresh air, the infection it might contain would be effectually dissipated and destroyed during the voyage.

The other articles to which the crew can have access, are, the provisions, the sailors’ chests, the spare cables, and the spare sails. They are all, except the last, contained in the ship’s steerage.

The provisions are never suspected to be infectious. During the voyage, the sailors’ chests may be washed; and their contents washed or aired repeatedly; and the spare sails may be frequently ventilated. The spare cables need no purification, being hauled out of the sea, on the ship’s departure from Turkey, and immediately immersed in the sea on her arrival in England. Besides, ropes and other articles manufactured with tar, or, which is a better reason, whose fabric cannot possibly confine any pestilential poison from the air, can never be suspected to possess an infectious quality.

The most attentive care, however, should be taken, that such regulations be punctually and completely executed. Exact reports ought to be taken, when and in what manner every article was ventilated.

The minutest detail of every complaint, which any sailor or passenger had suffered during the voyage, should be daily entered in a checked register. By this method, the most authentic intelligence may be obtained, whether any symptom of the plague had appeared among them. All these facts ought carefully to be ascertained by oaths and cross-examinations.

If full satisfaction can be obtained, that these regulations were faithfully executed, and that the sailors had no doubtful complaints during the whole passage, the crew and the aired articles must be perfectly free from every suspicion of retaining any infectious quality. On their arrival in England, they need not be detained a single hour to perform quarantine. They are undoubtedly safe from every dangerous quality, and may safely be allowed full liberty from all restrictions. Neither passengers nor sailors could possibly approach a single infectious article of the cargo; and nobody can suspect that infection would remain latent in any person, during a whole voyage from the Levant to England.

But it must be understood, that the liberty of departure must be strictly confined to that part of the crew who do not assist or intermeddle with unloading the cargo.

2. The articles which require purification in England, are cotton, cotton yarn, silk, mohair yarn, goats wool, carpets, &c. The hold of the ship is entirely filled with this kind of merchandize, and during the voyage, the hatches are firmly caulked down, and every crevice completely closed with pitch. In like manner, the ship, between decks, is stowed full of these goods. The upper deck hatches are covered with equal care by tarpawling, and battened down, so as to keep out water. Whatever portion of pestilential poison
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may be thus enclosed, could not infect the crew. To employ the stowage to the best advantage, each bale of goods is pressed to half its natural bulk; if taken out during the voyage, it could not possibly be replaced; a circumstance which necessarily forms the greatest security from this danger.

Drugs, as opium, scammony, gums &c. and fruit, as figs &c. which constitute part of the cargo of Turkey ships, are never deemed infectious articles. However, the coverings in which they are packed ought certainly to be washed or aired attentively in the lazaretto, to remove every suspicion of mischief.

An exact copy of the manifest of the ship's entire cargo, attested by the consul or some other indisputable authority, at the loading port, ought to be delivered into the proper office on her arrival. By a late order of government, I understand, that such an authentic manifest is required from all masters of ships from foreign ports. The object of the regulation was to secure the revenue, but may be of equal use for the prevention of abuses or frauds against the rules of quarantine. It will clearly discover every article which ought to be landed for the purpose of disinfection.

The lazaretto should be constructed on a plan to allow the completest perfusion.

All the doubtful contents of the vessel should be freely exposed, and for a sufficient time, to a current of air. It is highly probable, that the ventilation of a few minutes might completely deprive any article of its infectious quality. However, for the sake of perfect safety, it may be continued several hours, or days. If the poison of the plague were lodged in a bale of cotton, the air which passes through every infectious portion of it, would acquire a pestilential quality. This air would soon be blown away. But fresh air would, in like manner, acquire a pestilential impregnation; till all the contaminated effluvia or miasms are exhausted; when it would cease to be infectious. Exactly, in like manner, when water is poured into a vessel which contains a lump of sugar, it becomes sweet. A current of water, through such a vessel, would gradually convey away the sweetness, till all the sugar is exhausted. When the sweetened water is run off, and fresh water is poured into the vessel, it no longer acquires any sweetness.—The cases bear a perfect analogy to each other.

An exact register should be kept, when, how long, and how minutely, through every portion of it, each article had been aired. With proper checks, and superintendence, this important business ought, and might be executed in the completest manner.

During this quarantine, the strictest care will be required to prevent all possible communication between the people shut up in the lazaretto and all persons out of it, and for days after it is finished. If the people, who are performing quarantine, in the lazaretto, be permitted to see their relations and acquaintance, great care must be taken to keep them separated at a sufficient distance from each other. There should be a complete lattice or wire partition, to guard against the possibility of the minutest article being given out of the lazaretto. By this precaution, the merchant's property, and the safety of the community, will both be effectually secured.

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If the lazaretto be sufficiently large and commodious, the process of airing and thoroughly purifying the whole cargo, would require a very short period of time. It seems probable that an hour, or perhaps a single minute of such ventilation, would more perfectly disinfect a bale of cotton, wool, silk, &c. than the tedious operation of "porters in forty days, who thrust their hands and arms into them every day for twenty days at one end, and twenty days at the other," (see the *Account*, p. 20.) or, even by placing the goods in the open air, and turning them two or three times a day.

If these ideas be accurate and true, a lazaretto should be constructed conformably to them. In the beautiful plans exhibited in your book, there seems to be no contrivance whatsoever to admit air into the warehouses, or other parts of them, except common windows. But if a large and lofty building were constructed on purpose to allow a free circulation of air on all sides, with no other obstruction than flat shelving boards, to keep out the rain, somewhat in the form of a house for drying leather, herrings &c.; the current of winds through it would encrease the ventilation, and consequently the purification of the merchandize it contained in a very high proportion. The inside of the building should be constructed on such a plan, as freely to expose the cotton, wool, silk, and every other suspicious article of the whole cargo, to the air, in as large a surface as possible, and they should be so arranged that every portion of them may receive a thorough and minute perfusion. The more completely these measures are executed, the more speedily and more perfectly the quarantine will be accomplished. Let the building for ventilation be separated into lofty rooms, to extend undivided from the ground to the roof. Let each of them be large enough to contain a ship's whole cargo. The goods might be easily wheeled upon the floor, level with the ground, and might be elevated by pullies to any convenient height. In this situation they might be safely and completely expanded to the air, which would every moment remove some part of the poison, till every particle capable of doing mischief was exhausted by solution, or diffusion in the atmosphere.

All these regulations might be performed with most ease and safety upon the cargo, before it is embarked in *Turkey*; and if we could obtain *perfect assurance* of its complete accomplishment in that country, lazarettos in *England* would be superfluous, except one to receive passengers or sailors who had suffered suspicious symptoms during the voyage.

But we may maintain, with confidence, that if all intercourse with strangers be avoided during the voyage, the plague could not possibly appear on board ships, whose cargo had been perfectly purified by ventilation; except the distemper had been caught previously to her departure from the infectious port. In this case the distinguishing symptoms would speedily appear; and she ought to be required immediately to return to the same port, or to repair to the nearest lazaretto.

The lazaretto should contain commodious rooms for guardians and porters. It would sometimes happen, that some of the crew of a ship might have a disorder which had a resemblance to the plague, during the voyage. To remove all doubts, it might be thought prudent, in such a case, that the whole crew should perform a quarantine in the lazaretto.

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On this consideration, proper apartments must be provided for the accommodation of the crew of one or more ships. Several well-ventilated chambers may be required as an hospital, which would be necessary, in case any disorder, especially of a suspicious nature, should occur. The whole lazaretto ought to be surrounded by a double wall, to prevent all irregular intercourse.

Besides the guardians, porters, and sailors, if any be employed, who during the quarantine of any goods &c. must be strictly confined to live within the lazaretto; a director or visitor may be required. He should see that the regulations are faithfully executed in regard to the airing of goods, &c. and keep a full register of these transactions. This duty he may faithfully fulfil, without approaching any article within the infectious distance of feet. Indeed the contaminated atmosphere which issues from the poison, appears to extend to so short a distance, that by keeping to windward of it, and by observing some other judicious cautions, it may reasonably be hoped, that even the guardians and porters of the lazaretto might be preserved from all danger of catching the plague, while they were performing the necessary duty of opening the most pestilential packages.

The queries proposed (p. 32.) by my very ingenious friends Dr. Aikin and Dr. Jebb, appear to be extremely judicious and instructive. But the minute detail of single cases leads to more satisfactory conclusions than the general answers of the physicians to each query. Thus some of your respondents affirm, that the period between infection, and the commencement of the disease, does not exceed one, two, or three days: but the fact plainly related (p. 46.) states, that a porter came out of the lazaretto on the 21st of January, 1784; that after a fever of five days, a tumour appeared in his groin on the 30th of January. Hence it seems evident, that the period between infection and the commencement of the disease was at least to the 5th day inclusive, and probably longer. Again, "on the 5th of February a boy died, after an illness of four days, on board of a *Rovingese* vessel. On the 21st they put into *Porto Cigalle*, where the master and two sailors were taken ill, and soon died." This case, if accurately related, seems to imply, that infection may remain near three weeks in the patient before the symptoms begin.

In your proposed journey through *Russia*, some valuable facts of this kind may probably be collected. *Moscow* and *Kiow*, with some other neighbouring towns, are the most likely places that can be thought of to supply such intelligence; as the plague made the most dreadful devastation in that country so lately as 1770.

When this terrible pestilence spreads among a people who are strangers to it, the progress of the distemper is noted with the most accurate attention. Facts are observed and remembered with minute fidelity. Among the governors, or other nobility, and especially among the physicians and surgeons of these towns, you may obtain authentic and instructive answers to the following queries:

1. Do you know in what manner, and at what time, the infection of the plague was communicated, in any particular case?

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2. In such a case, what was the day of the month, or of the week, when the person received the infection; and on what day did the distemper commence?

3. Is it recollected at what distance, and for what duration of time, the infected person was placed from the infectious patient, goods &c.?

4. When several persons in the same family were attacked, what was the exact date of their separate seizure? Was one generally attacked several, and how many, days previous to the rest?

5. On the contrary, What number of people in each family have you known exposed to as intimate or more intimate an intercourse with infectious patients, things &c. who have yet never been attacked by the distemper?

Names, dates, and distances, should be accurately noted in the answers. If a sufficient number of facts to ascertain the period between infection and the commencement of the plague, could be obtained, they would determine with precision the proper duration of the *quarantine for a suspected person*; which, from our present imperfect knowledge of the subject, is extremely vague and doubtful.

What number of lazarettos may be required in *England*, future experience might determine. Beside such an establishment for the ports of *London* and *Bristol*, there would evidently be one wanted for that of *Liverpool*. The latter would be peculiarly useful to facilitate the importation of cottons from *Turkey* for the *Lancashire* and *Cheshire* manufactures. Such a lazaretto as is above described, would greatly encrease the safety, and diminish the expence and the delay of such importations. An excellent situation for such a building naturally presents itself. *Hillbree Island* is placed at the conflux of the rivers *Mersey* and *Dee*, just at the entrance of the *Liverpool* and *Chester* ports. The size appears to be fully sufficient for the purpose, being about four acres of land. There is good anchorage for ships of 100, 150, or 200 tons, the usual size of those employed in the *Turkey* trade, within a few yards of the island. It supplies a spring of good water. *Liverpool* would execute such an undertaking with as much spirit, and as truly commercial a genius, as any town in *England*, or perhaps in *Europe*. Their corporation is eminently opulent and liberal. However, government would undoubtedly grant a sum of money adequate to the expence of erecting a public work, so essentially connected with the safety of the nation. The charge of supporting the establishment might probably be supplied with most propriety by duties on the goods, which receive the benefit of such purification.

The advantages that might fairly be expected from the proposed plan of lazarettos in *England* may thus be shortly stated:

1. There would be a much less degree of danger to *Great Britain*, of importing the plague, than we are at present exposed to. This danger is well explained in the letter from the *English* merchants at *Smyrna*, inserted (p. 26.) of your *Account*.

2. All the cargo capable of exposure to fresh air on the passage home, and all the crew, except the sailors who may be employed to unload the goods, are free immediately on their arrival in *England*: to detain them a single hour would be wholly superfluous.

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3. After the purification of the ship, by washing the hold &c. with vinegar, or by explosions of gunpowder, she may be dismissed with perfect safety.

4. As many of the goods as could be exposed, at once, to a free ventilation in the lazaretto, would, in a few days, be completely disinfected. If the ventilating buildings were sufficiently capacious to contain the whole cargo of a ship, at the same time, no part of it need be detained longer than a *single week*. Such a quarantine as is here proposed, will, in my humble opinion, much more perfectly remove every danger of infection, than all the regulations mentioned in your very satisfactory *account* of their proceedings, though continued for 40, or, as is done in some ports, for 80 days.

5. The sailors employed to unload the ship, the guardians and porters of the lazaretto, with probably a supercargo to take care of the goods, are the only persons, or things, that require any tedious confinement. How long their separation from society should be enjoined, after the cargo has been completely ventilated, may be difficult to determine. The fact above quoted, from your account p. 46, implies that it should not be less than three weeks.

6. By diminishing the delay and other unnecessary difficulties and expences, which clog our present commercial intercourse with the Turkish empire, our old trade with those extensive dominions would be immediately encreased. Lazarettos would instantly remove the danger, but not as quickly and perfectly the fear, of importing the plague. This fear, however, would gradually abate, and our intercourse with the numerous ports of the Mediterranean sea would proportionally encrease. An extensive vent would thus be opened for the exportation of British manufactures, accompanied with many other national advantages which it will be superfluous to specify.

I have already hinted the general outline of this proposal to a philosophical acquaintance at *Liverpool*, in the mercantile line. It shall be immediately communicated to my respectable friend Mr. *Blackburne*, one of the parliamentary representatives of *Lancashire*. From the habits of intimacy with which he has long honoured me, I shall have no difficulty in discussing the subject with him freely and fully. If the business appear to be practicable, it will not want zealous and intelligent promoters in this spirited nation.

While I am upon the subject of preventing the propagation of infections, you merit particular thanks for the honourable notice taken of our fever wards in the *Chester* infirmary. (See the *account* p. 209.) The chief aim of our regulations is not merely to preserve the lives of the infected patients. The principal purpose and benefit of the establishment is to prevent any infectious fever from spreading through poor families, and through the town. It effectually suppressed the febrile contagion which alarmed *Chester*, in 1784. A plan of this kind has been an object of my anxious wish and attention, ever since the year 1774, when we were visited by a like epidemick. (See the *Philosophical Transactions*, vol. lxxviii. p. 140). The success of our small-pox society, in checking the progress of the variolous contagion, in closely adjoining houses, encouraged and enabled me to propose a plan, which,
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by easy rules, might prevent the communication of infectious fevers from one ward of the infirmary to another. The example of *Chester* may probably induce other towns to adopt such easy and efficacious regulations, to prevent the propagation of infectious distempers.

In the above, and in other instances, I entertain high expectations of the benefit, which mankind might derive from civil regulations to check the progress of distempers. In like manner, I have long nourished a sanguine hope, of extensive advantages, to the bulk of the people, by bestowing on them such an education as would be conducive to the prevention of vices. As human wisdom and power can be much more beneficially exerted in preventing, than in curing diseases: so they may be much more successfully employed in the prevention, than the correction of crimes. This remark arises from a subject largely considered in your last publication, and in which I anxiously interest myself.

And I cannot conclude this long letter without returning you my hearty thanks for the honourable character you have given of our plan to instruct *all the poor boys* of *Chester*, in reading, writing, and accounts. (See p. 120). Your recommendation will probably have an extensive influence in exciting other towns to adopt like regulations. Our other institution, to teach *all the poor girls* in *Chester* to read, knit, spin, and sew, seems no less to merit your approbation. From our conversation on this subject, at the last visit you favoured me with, your sentiments perfectly accorded with mine, on the great advantages that might reasonably be expected from such an establishment. Your silence on this head rather disappointed me; it probably proceeded from inadvertency: or, your subject more directly introduced the schools for the instruction of boys. Both these institutions being favourite children of mine, you will please to excuse a parental partiality for them. I was solicitous that they should have gone together into the world with the recommendation of an author, who has deserved and obtained the attention and the good wishes of the wisest and the best men in this enlightened and humane age.

I am, with the warmest good wishes for the accomplishment of your various benevolent pursuits, and with great respect,

Your obliged and faithful friend,

Chester 30th May, 1789.

JOHN HAYGARTH.

P. S. I shall be very anxious to learn whether this letter reaches you, before your intended journey to the continent. Through fear, lest delay might occasion disappointment, it is written with great hurry and inaccuracy.

SECOND LETTER TO JOHN HOWARD, ESQUIRE.

DEAR SIR,

AFTER suffering some anxiety, for a few days, lest my letter had not arrived before your departure from England, I had the satisfaction to receive your very kind and friendly answer of the 12th. As you have resolved, after passing through *Russia*, to visit *Egypt* and *Barbary*, you will have an opportunity to determine an important question concerning the origin of the plague. It has been asserted by authors of high credit, that the pestilential contagion is generated in the great canal of *Grand Cairo*, by the filth, carrion &c. which putrefy therein; and that it annually proves destructive to the inhabitants of that city, till the overflowing of the *Nile* washes away the filth, and the cold winds, which blow at the same time, carry off the effluvia which exhale from it. These opinions have been greatly invalidated by the observations of three very intelligent French travellers, *De Tott*, *Savary*, and *Volney*. They mention that the plague ceased for several years after the former Russian war, and that it is generally imported into *Egypt* from *Constantinople*, *Smyrna* &c. Which of these opinions is true, might easily be ascertained. Do the commencement and cessation of the plague correspond with the ebbing and flowing of the *Nile*? Or, does it spread at the ports where, and at the time when, merchandise arrives?

The famous plague of *Athens*, according to *Thucydides*, began in *Ethiopia*. This historical fact has suggested to some authors a notion, that the plague is generated in that country, and thence brought into *Egypt*. This opinion might, in like manner, be examined by observation. What connection has the spread of this pestilence with the arrival of the Ethiopian caravans, in regard to both time and place?

On the whole, it will probably appear, that the plague, like the small-pox, is no where now generated, but simply propagated from one country to another. This important question may be determined, with a high degree of evidence, by your inquiries in *Egypt*. Be sure to ascertain, with all possible accuracy, the time when each epidemick began and ceased, in every town or district, and for as many years as history or tradition has recorded them. We may hence learn whether the folly of the *Turks* is the sole cause of the continuance of this calamity.

Some copies of your *Account of the Lazarettos*, properly presented to some people in power at *Constantinople*, might possibly arouse their attention. The new sultan is said to be less grossly ignorant than his predecessors. The dangerous war, in which he is engaged, may possibly farther improve his faculties. He may perhaps be excited to think and act with the sense and spirit of a man. No measure appears more practicable than to exterminate

minate the contagion from the whole world. All the necessary regulations are founded on two words, namely, *cleanliness* and *separation*. However, we have less reason to blame, and wonder at, the folly of the *Turks* for nursing this pestilence in their bosoms, while the enlightened nations of Europe preserve and propagate another dreadful pestilence, the small-pox, with nearly an equal degree of absurdity. They both spread by the same laws, and might be suppressed with equal ease and certainty.

While I very sincerely regret this journey, so dangerous to a life of great importance to your country and to mankind, the consideration, that it may answer such valuable purposes, in some degree reconciles the idea to my mind.

I cannot understand from what motive you have resolved to undertake a journey into *Barbary*. So ignorant a people can probably neither afford you any useful information, nor are they sufficiently intelligent to profit by your instruction.

If you continue your resolution of passing through *Russia*, I would recommend to your notice the treatise on the plague by Dr. *Mertens*. The French edition is later and better than the Latin. It is worthy of remark, that on the 23d of Dec. 1770, *before* he had seen the distemper, he presented a memorial, wherein he asserts that infection is communicated by the *touch* of the patient or of contagious things, and by no other means. This observation is often repeated. But it is also frequently contradicted by other observations, in which he allows that breathing the air near a patient communicates infection.

At last, he enjoins a separation of twelve feet between the infectious, and those whom he wishes to preserve safe from infection.

This is certainly a safe, and probably more than a safe distance.

In another place (see *Inquiry*, p. 19) I have endeavoured to prove, that the natural small-pox is *always* propagated through the medium of air, and the inoculated by contact of the poison. It is highly probable, that the like modes of communication are strictly applicable to the plague.

This treatise of Dr. *Mertens* is in many respects excellent. The instance of candour, above related, whereby he corrects a preconceived error, is highly meritorious. There is (p. 39) a remark which seems to correct a conclusion, which, in my former letter, I had ventured to deduce from a case related in your *Account of Lazarettos*. He observes, that the convicts &c. employed at *Moscow* to bury the dead, generally fell sick of the plague on the 4th or 5th day after exposure to the contagion, and that very few remained well above a week. It is probable, that the remarks I have taken the liberty of addressing to you, on the best method of preventing pestilential contagion, may some time be published, though it is not yet determined in what form they shall appear. You may think that the opinions they contain do not merit much credit, being so widely different from the practice of those countries who have the best opportunity of acquiring knowledge on this subject, by experience and observation of facts. But the rules of quarantine were originally established in times of great ignorance. They have been continued, without correction, through ex-
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SECOND LETTER TO JOHN HOWARD, ESQ.

cessive terror of the distemper. Any innovation in the regulations, which reason and experience might suggest, has been thought too hazardous to attempt.

The rules I have proposed are the result of serious deliberation, and thorough conviction. I am professionally responsible for their justness and truth. My aim is to serve the cause, which you have so meritoriously undertaken. On that consideration, I am anxious to receive your opinion, shortly stated, upon this head.

I am, with the sincerest good wishes for your health and happiness, your obliged and faithful friend,

Chester, 19th June 1789.

JOHN HAYGARTH.

THE END.

